

Tomio YAMAGUCHI*: *Drepanolejeunea obtusifolia* sp. nov.
and *Euosmolejeunea fuscobrunnea* Horik. from the
Yaeyama Islands, Japan**

山口富美夫*: 八重山群島産の *Drepanolejeunea obtusifolia*
(新種) と *Euosmolejeunea fuscobrunnea* Horik. について

Among the bryophyte collections made in the Yaeyama Islands (southernmost of the Ryukyu Islands) I have encountered two noteworthy species of the Lejeuneaceae (Hepaticae): one is to be described as a new species of *Drepanolejeunea* and the other is *Euosmolejeunea fuscobrunnea* Horik. which has been very poorly known since the original description by Horikawa (1934).

1) *Drepanolejeunea obtusifolia* Yamaguchi, sp. nov. (Fig. 1)

Habitus similis *Drepanolejeuneae erectae*, sed differt (1) plantis parvis (caule ca. 50 μm in diametro, cum foliis 0.4–0.6 mm lato), (2) amphigastriis caulibus cuneatis, 1/2–2/3 bilobis, lobis anguste triangulatis, (3) lobis foliorum florarum spathulatis, apice rotundatis, marginibus fere integris.

Plants small, forming small patches, pale green to olive-green. Stems 3–5 mm long, about 50 μm in diameter, 0.4–0.6 mm wide with leaves, sparsely and irregularly branched; in cross-section of stem epidermal cells 7, larger than the medullary cells, medullary cells 3, cell-walls thick, with small trigones; rhizoids rather few, rhizoid initial area distinct. Leaves imbricate, obliquely spreading; leaf-lobes slightly convex, ovate to triangular-ovate, slightly falcate, 0.2–0.3 mm long, about 0.2 mm wide, obtuse or subacute, margin irregularly and remotely dentate or nearly entire; apical cells about 10 μm in diameter, median cells 15–22 \times 15–18 μm , smooth, walls thin, with indistinct intermediate thickenings and small trigones; oil bodies 2–3 per cell, spherical, 2.3–3 μm in diameter, grayish, compound, granules about 0.3 μm in diameter, somewhat indistinct; ocelli 3–6 per leaf-lobe, 1–3 at leaf-base, 0–3 at middle, 25–55 \times 20–30 μm , filled with a large compound oil body; leaf-lobule about half the length of lobe, inflated,

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ovate to subquadrate, margin not or slightly incurved, apical tooth spinose, unicellular, slightly curved to the keel, with a hyaline papilla on the proximal base; keel arched. Underleaves distant, slightly wider than stem, cuneiform in outline, 80–100 µm long, 40–70 µm wide, bilobed to 1/2–2/3 the length, lobes narrowly triangular, 3–5 cells long, 1–2(–4) cells wide at base, cells of lobes somewhat mammillose, uniformly thin-walled, disk rectangular, usually with 6 marginal cells surrounding rhizoid initial cells.

Autoicous. Male inflorescence on a short lateral branch, occasionally on a female subfloral innovation, capitate; male bracts in 1–3 pairs, erect-spreading, closely imbricate, strongly inflated, subequally bilobed. Female inflorescence on a short lateral branch, occasionally with a single subfloral innovation; female bracts slightly larger than stem-leaf, lobes spathulate, with rounded apex, nearly entire along margin, 0.2–0.3 mm long, about 0.15 mm wide, lobule about 4/5 the length of lobe, oblong, obtuse to subacute; female bracteoles elongated obovate about 0.2 mm long, 0.1 mm wide, bilobed to 2/5 the length, lobes triangular, acute at apex, sinus acute. Perianth obovate, not compressed dorsiventrally, 0.25–0.3 mm long, 0.2–0.3 mm wide, sharply 5-keeled, keels denticulate due to projecting cells.

Type: Japan. Ryukyu Isls. Okinawa Pref.: Yaeyama Isls., Ishigaki Isl. (Lat. 24°25'N, Long. 124°11'E), Mt. Omoto, 470 m alt., on tree trunk in evergreen forest (leg. T. Yamaguchi, July 11, 1982, no. T. Y.-2666—holotype in HIRO, isotype in NICH).

Diagnostic characters of this species are (1) the very small plants, (2) the ovate to triangular-ovate leaf-lobes with an obtuse or subacute apex, and (3) the spathulate lobes of female bracts with a rounded apex and nearly entire margin. This species is similar to *D. erecta* (Steph.) Mizut. (Himalaya, China, Japan) in the leaf shape, but the latter is distinguished from it by the orbicular underleaves and the dentate lobes of female bracts with an acute apex.

2) *Euosmolejeunea fuscobrunnea* Horik.

This species was described by Horikawa (1934) based on sterile plants from Iriomote Island. According to the original description, important characters of this species are (1) the dark-brownish plants, (2) the widely ovate leaf-lobes with a subacute apex, (3) the large trigons and intermediate thickenings of cell-walls of leaf-lobes, (4) the small leaf-lobules with a strong apical tooth, and (5) the large reniform underleaves with a strongly sinuate insertion line.

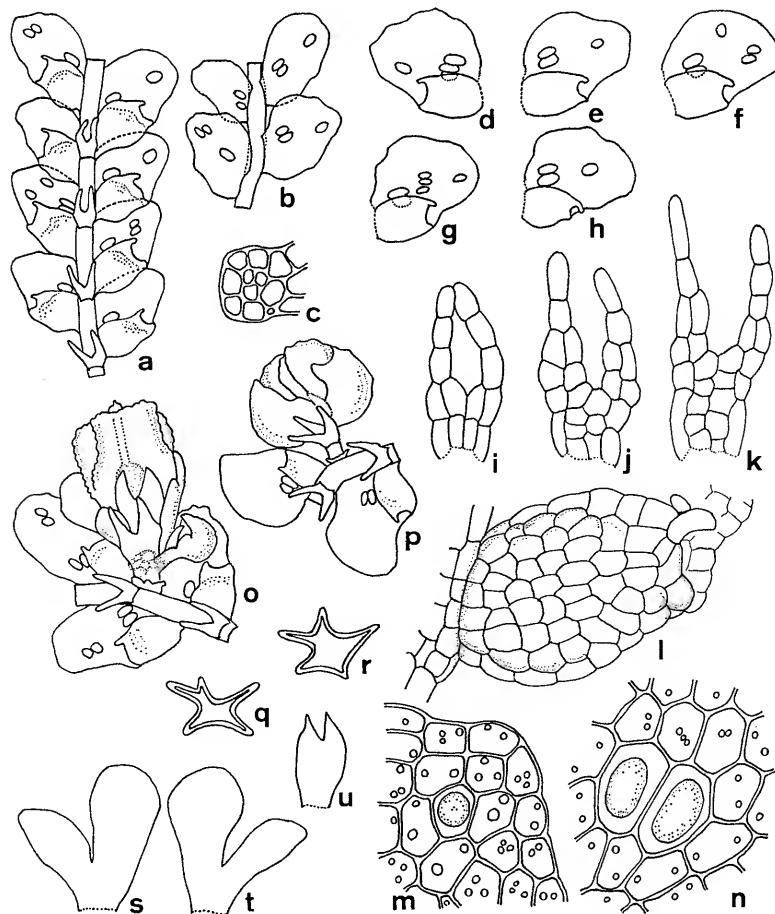


Fig. 1. *Drepanolejeunea obtusifolia* Yamaguchi. a. Part of plant, ventral view. b. Do., dorsal view. c. Cross-section of stem. d-h. Leaves. i-k. Underleaves. l. Leaf-lobule. m. Cells from the apex of leaf-lobule with oil bodies; the cell filled with a single large oil body is an ocellus. n. Ocelli and neighboring cells near the base of leaf-lobule with oil bodies. o. Female inflorescence, ventral view. p. Male inflorescence, ventral view. q, r. Cross-sections of perianth. s, t. Female bracts. u. Female bracteole. a, b, d-h, o-u, $\times 61$; c, i-l, $\times 223$; m, n, $\times 363$. All figures were drawn from holotype (HIRO T. Y.-2666).

In addition to these, Horikawa's text-figure shows (6) a hyaline papilla of leaf-lobule on the proximal side of apical tooth. These characters of (1)-(6) were recognized by my observation of the type specimen, but another important characteristic, which Horikawa overlooked, must be added: (7) one to two ocelli in the basal portion of leaf-lobes. By the characters of (6) and the (7) it does not agree with the genus *Euosmolejeunea* (= *Cheirolejeunea*). Amakawa (1967), who studied Horikawa's description and figures, considered that this species was to be excluded from *Euosmolejeunea* and was related to *Taxilejeunea convexa* Steph. (a synonym of *Lejeunea microloba* Tayl.). However, the points (1) and (7) negative his opinion. Judging from a combination of the characters (1)-(7), I have concluded that this species is most appropriately referable to the genus *Ceratolejeunea*; among the species of this genus, *C. oceanica* (Mitt.) Steph. agrees well with *E. fuscobrunnea*, especially in (2), (3) and (5) which Mizutani (1981) pointed out as the distinguishing characters of *C. oceanica*. *C. oceanica* has been known from tropical Asia northward to the Yaeyama Islands, and I collected this species from rocks (4 specimens) and tree trunks (2 specimens) on Iriomote and Ishigaki Islands.

Ceratolejeunea oceanica (Mitt.) Steph., Spec. Hepat. 5: 428 (1913).—*Euosmolejeunea fuscobrunnea* Horik., J. Sci. Hiroshima Univ., Ser. B, Div. 2, 2: 271, f. 57 (1934), *syn. nov.* For further synonymy see Mizutani (1981).

Specimen examined. Japan. Ryukyu Isls. Okinawa Pref.: Yaeyama Isls., Iriomote Isl., Mt. Goza (leg. Y. Horikawa, no. 13485, holotype of *Euosmolejeunea fuscobrunnea* in HIRO).

Range. Thailand, Malay Pen., Java, Borneo, New Guinea, Samoa, Tahiti, Philippines, Taiwan (Botel Tobago), Japan (Ryukyus).

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References

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lejeunea. J. Hattori Bot. Lab. 49: 305-318.

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琉球列島南端域の八重山群島で採集された蘚苔類を研究中、クナリゴケ科苔類について次の新知見が得られたので報告する。

1) 石垣島の於茂登岳で採集された 1 標本は、雌花が 1 本のインノベーションをもつことから近縁の *Leptolejeunea* 属から区別され、*Drepanolejeunea* 属の 1 種と考えられる。しかし、植物体が小形で葉の背片先端が尖らないこと、また雌苞葉の背片先端が円く全縁であることなどの特徴から、同属の既知種と区別されるので新種として記載した。本種の葉形は、*D. erecta* に似ているが、後者は雌苞葉の背片が鋭頭で鋸歯があることなどの点で明らかに異なる。

2) *Euosmolejeunea fuscobrunnea* は Horikawa (1934) によって西表島から記載されたものであるが、今回筆者はそのタイプ標本を調べ、原記載文で見落とされていた葉の眼点細胞を認め、*Ceratolejeunea oceanica* に他ならないことを確認した。本種は熱帯アジアを中心に、八重山群島を北限として分布するものである。

□趙繼鼎・徐達旺・孫曾美：中国地衣初編 (Zhao Ji-ding, Xu Lian-wang & Sun Zengmei: *Prodromus lichenum Sinicarum*) 156 pp., 46 pls. 1982. 科学出版社, 北京. 2.70 元. 中国で出版された最初の地衣類の学術的紹介書といってもよい。それぞれの属で種の検索表を示しながら、ウメノキゴケ属 *Parmelia* (センシゴケ属、フクロゴケ属を含む) 82 種、サルオガセ属 *Usnea* 64 種、ムカデゴケ属 *Physcia* 42 種、ゲジゲジゴケ属 *Anaptychia* 34 種の計 222 種が収録されている。ほとんど伝統のない中国で、これだけの種を独力で検索するのは大変な努力だったと思われる。しかし、ウメノキゴケ属については、朝比奈泰彦：日本之地衣 第 2 冊 ウメノキゴケ属 (1952)，サルオガセ属は朝比奈泰彦：日本之地衣 第 3 冊 サルオガセ属 (1956)，ムカデゴケ属は J. W. Thomson: The lichen genus *Physcia* in North America (1963)，ゲジゲジゴケ属は S. Kurokawa: A monograph of the genus *Anaptychia* (1962) にほぼ準拠している。学名と文献以外は中国語で書いてあるために充分理解できない点もあるが、これを出発点としてこれから的研究の発展に期待したい。巻末の図版 46 葉には本文に書かれている変種、品種を含む全ての taxon の標本の写真が示されているが、やや鮮明を欠く点が惜しまれる。

(黒川 道)